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10/798,816	03/10/2004	Nicole S. Carpenter	BUR920000141US2	7130

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EXAMINER	
KACKAR, RAM N	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/798,816
Filing Date: March 10, 2004
Appellant(s): CARPENTER ET AL.

John J. Tomaszewski
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/26/2007 appealing from the Office action mailed 11/21/2006

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct, at least in as far as mapping of limitations to specification are concerned.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 6,766,813	Sayka et al.	07-2004
US 5,120,369	Malotky Lyle O.	12-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 11 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sayka et al (US 6766813) in view of Lyle O. Malotky (US 5120369).

Sayka et al disclose an apparatus for removing contaminate particulate matter from a semiconductor wafer and disclose a support (Abstract and Fig 1), energy (acoustic wave)

forming means to dislodge particulate matter (Col 3 lines 1-20) and means to remove particulate matter (Col 4 lines 45-57).

Sayka et al fail to disclose means for applying a sacrificial coating of a polymer, curing and removal of particulate matter with it.

Malotky discloses an apparatus for removing material from a surface by spraying a polymer in solution or suspension, which cross-links to a film, which is removable by stripping (Abstract, Col 1 lines 57-65, Col 2 lines 5-29 and Col 4 lines 13-14).

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to have used strippable polymer material to encapsulate dislodged particles from the substrate of Sayka et al in order to safely and completely remove contaminate particulate matter from the substrate.

(10) Response to Argument

Claimed invention

The claimed invention is directed to an apparatus to remove contaminant particles from a semiconductor substrate by applying a sacrificial coating of a curable polymer on its surface, dislodge particles from the surface by applying energy in order for them to be captured by the polymer and removing them by stripping away the polymer coating.

Sayka et al disclose an apparatus to remove contaminant particles from a semiconductor substrate by dislodging particles from the surface by applying energy in order for them to be captured by a liquid stream to be removed by its flow.

Malotky discloses an apparatus for removing material from a surface by spraying a polymer in solution or suspension, which cross-links to a sacrificial film, which is removable by stripping. Malotky does not disclose application of energy.

The rejection is based upon the combination by replacing liquid stream by polymer coating in the reference of Sayka et al since removing particles by a strippable polymer by immobilizing them would be safer and precisely controlled.

Response to Arguments

Applicant argues that in Malotky, cured strippable polymer film containing the contaminant particles, is not formed and that both Sayka et al and Malotky teach washing away of particles.

As discussed above, this is not correct since Malotky teaches for example:

"A novel method and process for applying a tailor-made polymer film system a metal surface for the purpose of immobilizing and decontaminating hazardous chemicals from the said surface using a polymer that will take up the undesirable materials by solution, absorption adsorption and hold such undesirable materials in solid suspension with subsequent stripping of the polymeric material." (Abstract) and "The resultant polymer film can be easily stripped and safely disposed of." (Col 4 lines 13-14)

Further, the limitation "means for curing" does not point to any specific apparatus in the specification and teaches that any known means, including chemical means could be used.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Ram Kackar

Conferees:

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